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Michael F. Scialise

Name

Michael F. Scialise

Signature

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Patent Application Of: Leising et al.

For: Silver Vanadium Oxide Provided With A Metal Oxide Coating  
the specification of which is being transmitted herewith

Assistant Commissioner of Patents  
Washington, D.C. 20231

**INFORMATION DISCLOSURE STATEMENT  
Pursuant to 37 CFR 1.56**

1. Applicants submit herewith patents, publications or other information of which they are aware, which they believe may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR 1.56.

The filing of this Information Disclosure Statement (IDS) shall not be construed as a representation that a search has been made (37 CFR 1.56(g)), an admission that the information cited is, or is considered to be material to patentability or that no other material information exists.

The filing of this IDS shall not be construed as an admission against interest in any manner (Notice of Jan. 9, 1992, 1135 O.G. 13-25, at 25).

2. Attached is Form PTO-1449. Legible copies of all items

IDS For: Silver Vanadium Oxide Provided With A Metal Oxide Coating

Inventor: Leising et al.

3. A concise explanation of the possible relevance of the listed information items is as follows:

U.S. Patent Nos. 4,016,338 to Lauck, 4,158,722 to Lauck et al., 4,310,609 to Liang et al., 4,391,729 to Liang et al., 4,542,083 to Cava et al., 4,675,260 to Sakurai et al., 4,751,157 to Uchiyama et al., 4,751,158 to Uchiyama et al., 4,803,137 to Miyazaki et al., 4,830,940 to Keister et al., 4,964,877 to Keister et al., 4,965,151 to Takeda et al., 5,194,342 to Bito et al., 5,221,453 to Crespi, 5,298,349 to Takeuchi, 5,389,472 to Takeuchi et al., 5,545,497 to Takeuchi et al., 5,458,997 to Crespi et al., 5,472,810 to Takeuchi et al., 5,498,494 to Takeuchi et al., 5,498,495 to Takeda et al., 5,512,214 to Koksbang, 5,516,340 to Takeuchi et al., 5,558,680 to Takeuchi et al., 5,567,538 to Oltman et al., 5,670,276 to Takeuchi et al., 5,695,892 to Leising et al., 5,895,733 to Crespi et al., 5,955,218 to Crespi et al., 6,093,506 to Crespi et al., 6,130,055 to Crespi et al., 6,413,669 to Takeuchi et al., 6,558,845 to Leising et al. and 6,566,007 to Takeuchi et al. teach the synthesis of vanadium-containing active materials. Prior art synthesis for SVO are also described in Livage, J. Chem. Mater. 1991, 3, 578-593, Leising, R. A.; Takeuchi, E. S. Chem. Mater. 1993, 5, 738-742 and Leising, R. A.; Takeuchi, E. S. Chem. Mater. 1994, 6, 489-495.

4. U.S. Patents Nos. 4,310,609 and 4,391,729, both to Liang et al. and 4,830,940 to Kiester et al. are discussed in the prior art section of the application.

IDS For: Silver Vanadium Oxide Provided With A Metal Oxide Coating

Inventor: Leising et al.

5. The remaining patents are examples of the general state of the art

6. The person making this statement is the agent who signs below, who makes this statement on information, supplied by the inventors and the information in the agent's file.

Respectfully submitted,

By: Michael Scalise  
Michael F. Scalise  
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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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|                        |                |
|------------------------|----------------|
| Application Number     |                |
| Filing Date            | July 31, 2003  |
| First Named Inventor   | Leising et al. |
| Group Art Unit         |                |
| Examiner Name          |                |
| Attorney Docket Number | 37505.0202     |

| U.S. PATENT DOCUMENTS |             |                      |                      |   |   |   |
|-----------------------|-------------|----------------------|----------------------|---|---|---|
| Examiner Initials*    | Cite No. 1  | U.S. Patent Document |                      | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document<br>MM-DD-YYYY | Pages, Columns, Lines<br>Where Relevant Passages or Relevant Figures Appear |
|                       |             | Kind Code 2          | Number<br>(if known) |   |   |   |
| 1                     | 4,830,940   |                      |                      | Keister et al.                                  | 05-16-1989  |   |
| 2                     | 4,310,609   |                      |                      | Liang et al.                                    | 01-12-1982  |   |
| 3                     | 6,413,669B1 |                      |                      | Takeuchi et al.                                 | 07-02-2002  |   |
| 4                     | 6,130,005   |                      |                      | Crespi et al.                                   | 10-10-2000  |   |
| 5                     | 6,093,506   |                      |                      | Crespi et al.                                   | 07-25-2000  |   |
| 6                     | 5,955,218   |                      |                      | Crespi et al.                                   | 11-21-1999  |   |
| 7                     | 5,895,733   |                      |                      | Crespi et al.                                   | 04-20-1999  |   |
| 8                     | 5,695,892   |                      |                      | Leising et al.                                  | 12-09-1997  |   |
| 9                     | 5,670,276   |                      |                      | Takeuchi et al.                                 | 11-23-1997  |   |
| 10                    | 5,567,538   |                      |                      | Oltman et al.                                   | 10-22-1996  |   |
| 11                    | 5,558,680   |                      |                      | Takeuchi et al.                                 | 09-24-1996  |   |
| 12                    | 5,516,340   |                      |                      | Takeuchi et al.                                 | 05-14-1996  |   |
| 13                    | 5,512,214   |                      |                      | Koksbang  | 04-30-1996  |   |
| 14                    | 5,498,495   |                      |                      | Takada et al.                                   | 03-12-1996  |   |
| 15                    | 5,498,494   |                      |                      | Takeuchi et al.                                 | 03-12-1996  |   |
| 16                    | 5,472,810   |                      |                      | Takeuchi et al.                                 | 12-05-1995  |   |
| 17                    | 5,458,997   |                      |                      | Crespi et al.                                   | 10-17-1995  |   |
| 18                    | 5,545,497   |                      |                      | Takeuchi et al.                                 | 081-3-1996  |   |
| 19                    | 5,389,472   |                      |                      | Takeuchi et al.                                 | 02-14-1995  |   |
| 20                    | 5,298,349   |                      |                      | Takeuchi  | 03-29-1994  |   |
| 21                    | 5,221,453   |                      |                      | Crespi  | 06-22-1993  |   |
| 22                    | 5,194,342   |                      |                      | Bito et al.                                     | 03-15-1993  |   |
| 23                    | 4,965,151   |                      |                      | Takad et al.                                    | 10-23-1990  |   |
| 24                    | 4,964,877   |                      |                      | Keister et al.                                  | 10-23-1990  |   |

## FOREIGN PATENT DOCUMENTS

|                       |  |                    |  |
|-----------------------|--|--------------------|--|
| Examiner<br>Signature |  | Date<br>Considered |  |
|-----------------------|--|--------------------|--|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Unique citation designation number. 2 See attached Kinds of U.S. Patent Documents. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

Sheet 5 of 6

Sheet 5 of 6 Attorney Docket Number 37505.0202

|  |   |    |   |  |                                 |  |
|--|---|----|---|--|---------------------------------|--|
| <b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><i>(Use as many sheets as necessary)</i> |   |    |   | Application Number<br>Filing Date<br>First Named Inventor<br>Group Art Unit<br>Examiner Name | July 31, 2003<br>Leising et al. |  |
| Sheet  | 5 | of | 6 | Attorney Docket Number<br>37505.0202   |                                 |  |

**U.S. PATENT DOCUMENTS**

## FOREIGN PATENT DOCUMENTS

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
*(Use as many sheets as necessary)*

Sheet 6 of 6

|                        |                |
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| Application Number     |                |
| Filing Date            | July 31, 2003  |
| First Named Inventor   | Leising et al. |
| Group Art Unit         |                |
| Examiner Name          |                |
| Attorney Docket Number | 37505.0202     |

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

|                    |            |   |    |
|--------------------|------------|---|----|
| Examiner Initials* | Cite No. 1 | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate, title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.) | T2 |
|                    | 38         | SOLID-STATE CATHODE MATERIALS FOR LITHIUM BATTERIES: EFFECT OF SYNTHESIS TEMPERATURE ON THE PHYSICAL AND ELECTROCHEMICAL PROPERTIES OF SILVER VANADIUM OXIDE, RANDOLPH A. LEISING AND ESTHER SANS TAKEUCHI, CHEMISTRY OF MATERIALS, 1993                        |    |
|                    | 39         | SOLID-STATE SYNTHESIS AND CHARACTERIZATION OF SILVER VANADIUM OXIDE FOR USE AS A CATHODE MATERIAL FOR LITHIUM BATTERIES, RANDOLPH A. LEISING AND ESTHER SANS TAKEUCHI, CHEMISTRY OF MATERIALS, 1994   |    |
|                    | 40         | VANADIUM PENTOXIDE GELS, J. LIVAGE, CHEM. MATER. 1991, 3, 578-593   |    |
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| Examiner Signature | Date Considered |
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